Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

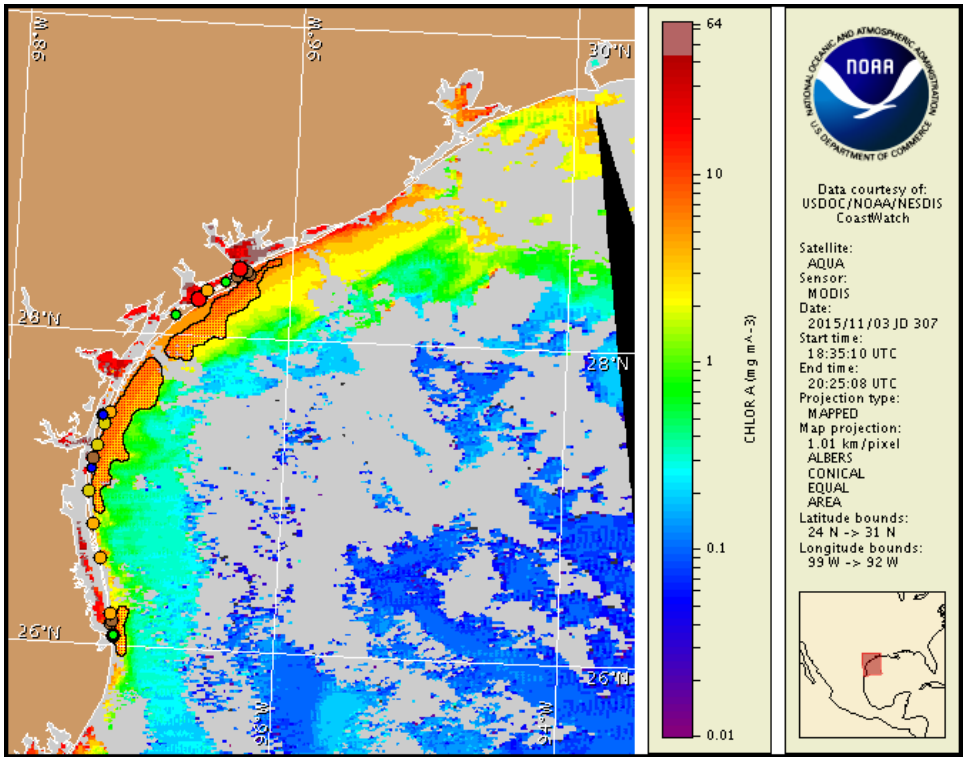
Thursday, 05 November 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, November 2, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from October 26 to November 4: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information can be obtained through the Texas Parks and Wildlife Department at:

http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml

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To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:

http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Karenia brevis (commonly known as Texas red tide) ranges from not present to high concentrations along the Texas coast from Matagorda Bay to the Rio Grande. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for Thursday, November 5 through Monday, November 9 is listed below:

Region: Forecast (Duration)
Matagorda Peninsula region: Low (Th-F), Very Low (Sa-M)
Bay region-Matagorda Bay: High (Th-M)
Bay region-San Antonio to Espiritu Santo Bay: High (Th-M)
Bay region-Aransas Bay to Aransas Pass: Moderate (Th-M)
Bay region-Corpus Christi Bay: High (Th-M)
Aransas Pass to PINS region: Moderate (Th-Sa, M), Low (Su)
Bay region-Upper Laguna Madre: Moderate (Th-M)
Padre Island National Seashore region: Moderate (Th-Fr, M), High (Sa-Su)
Mansfield Pass to Beach Access 6 region: Moderate (Th-Fr, M), High (Sa-Su)
Bay region-Lower Laguna Madre to Laguna Vista: Low (Th-M)
Beach Access 6 to Rio Grande region: Moderate (Th-M)
All Other Texas Regions: None expected (Th-M)

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Over the past few days, reports of respiratory irritation have been received from Padre Island National Seashore. Discolored water has been reported alongshore Mustang Island.

Analysis

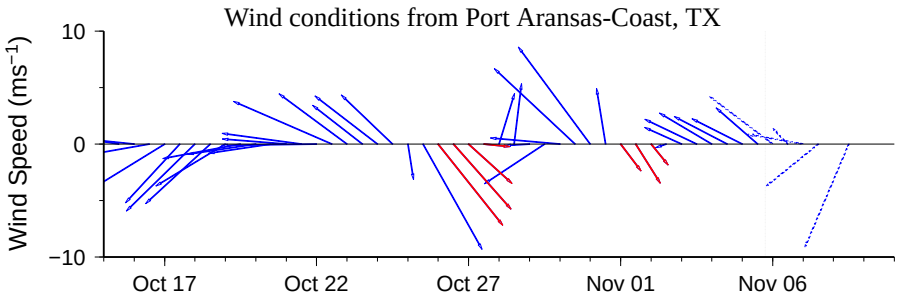
Karenia brevis concentrations range from 'background' to 'high' from Matagorda Bay to the Rio Grande. Recent sampling has confirmed the presence of 'background' to 'high' *K. brevis* concentrations within Matagorda and San Antonio Bays, 'low a' concentrations alongshore Matagorda Peninsula, up to 'low' concentrations in Aransas Bay, and up to 'high' concentrations in Corpus Christi Bay (TPWD; 11/2). Sampling indicates that concentrations have decreased from 'low b' to 'very low b' within the Upper Laguna Madre, and from 'medium' and 'low' to not present near Brazos Santiago Pass (TPWD; 11/3). Samples received from alongshore Padre Island National Seashore to South Padre Island continue to indicate that up to 'medium' *K. brevis* concentrations are present (TPWD; 11/3). Reports of dead and distressed fish were received last week from several coastal and bay regions from Espiritu Santo Bay to the Lower Laguna Madre (TPWD; 10/26-30). Discolored water has been reported alongshore Mustang Island at North Packery Channel and Bob Hall Pier (TPWD; 11/2). Detailed sample information and a summary of impacts can be obtained through Texas Parks and Wildlife Department at: http://www.tpwd.state.tx.us./landwater/water/environconcerns/hab/redtide/status.phtml. For information on area shellfish restrictions, contact the Texas Department of State Health Services.

In recent MODIS Aqua imagery (11/3, shown left) elevated to high chlorophyll (2-13 μg/L) is visible in patches along- and offshore the Texas coast from San Luis Pass to the

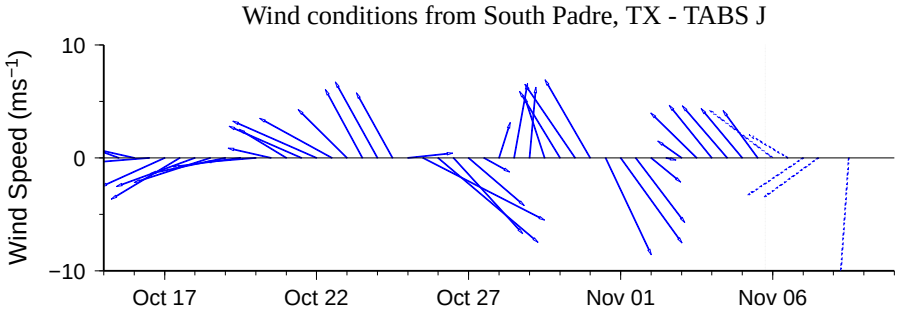
Rio Grande.

Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of 130km south from Pass Cavallo, 30km south from Aransas Pass, and 10km north from Brazos Santiago Pass from November 3 to November 8.

Derner, Keeney



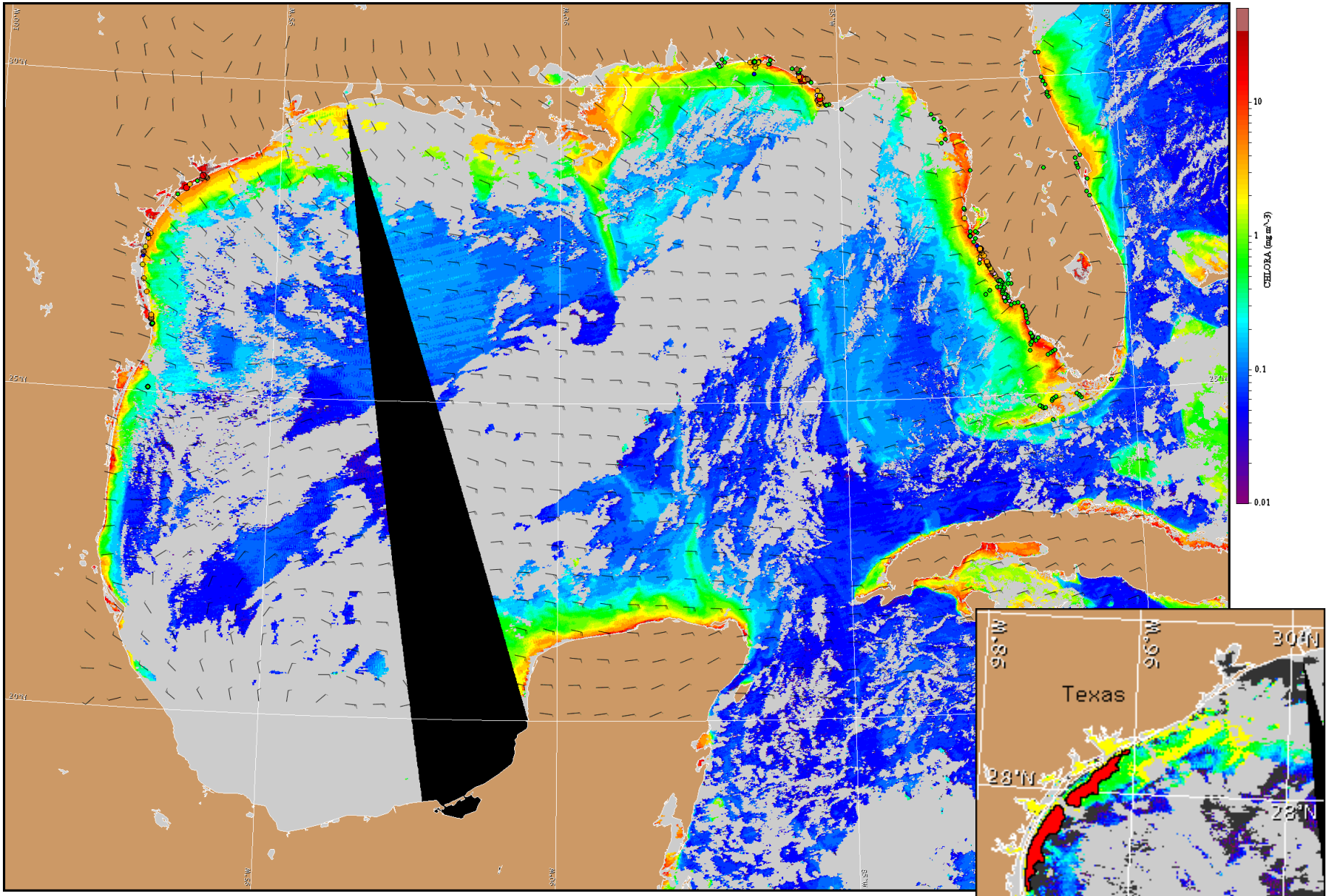
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



Wind Analysis

Port Aransas to Baffin Bay: Southeast winds (5-15kn, 3-8m/s) today becoming east (5-10kn, 3-5m/s) Friday. Northeast winds (10-20kn, 5-10m/s) Friday night through Saturday becoming north (15-25kn, 8-13m/s) Saturday afternoon through Sunday. Northeast winds (10-20kn) Sunday night through Monday.

Port Mansfield to the Rio Grande: Southeast winds (7-15kn, 4-8m/s) today becoming east (8kn, 4m/s) Friday. Northeast winds (7-15kn) Friday afternoon through Saturday morning becoming north (21-26kn, 11-13m/s) in the afternoon through Saturday night. Northeast winds (19-24kn, 10-12m/s) Sunday. East wind (8-13kn, 4-7m/s) Monday.



Satellite chlorophyll image and forecast winds for November 6, 2015 12Z with points representing cell concentration sampling data from October 26 to November 4: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). Cell count data are provided by Texas Parks and Wildlife Department. For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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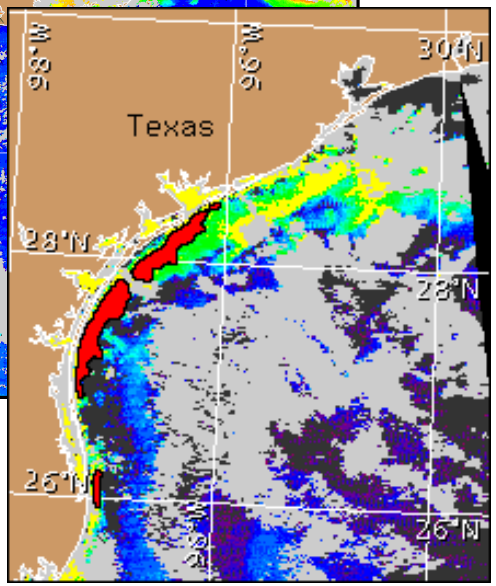

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).